

1 CHAIRPERSON DODUC: Thank you very much, Ms.

2 Walden. Thank you for joining us today.

3 Mr. Tucker, followed by Ms. Jenny Staats.

4 MR. TUCKER: Good afternoon. My name is Craig
5 Tucker. I'm the Klamath Coordinator for the Karuk Tribe.

6 The Karuk Tribe is the second largest tribe in
7 the State of California, with over 3400 members. About
8 half of the ancestral territory of the Karuk Nation is in
9 Siskiyou County.

10 The toxic algae blooms have been aptly described
11 in different reports in the media; and in the film you'll
12 see next are a major health threat for both people living
13 around the reservoirs, but also for people who live
14 downstream.

15 The toxic blue-green algae microcystis aeruginosa
16 has made people sick around the planet. The blue-green
17 algae itself secretes a toxin -- protein toxin called
18 microcystin. It's a water soluble toxin. So even though
19 when you look at the reservoirs and they turn this shade
20 of antifreeze green in the summer, the toxin itself is
21 colorless. And so even though you may not see algae
22 blooms downstream in the moving water because this algae
23 likes stagnant warm water, nutrient-rich water, which is
24 exactly what it finds in these reservoirs, those of us who
25 live downstream also have the potential of getting

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1 poisoned even though we can't see the algae because the
2 water soluble toxin is washing downstream of these dams.

3 We think the State of California needs to move
4 quickly to set a numerical water quality standard for the
5 toxin microcystin. The State of California, I understand,
6 has to do scientific review to come up with what that
7 standard is, because currently neither the State of
8 California nor the U.S. EPA has a standard. However,
9 since this problem is seen throughout the third world, the
10 World Health Organization has done the research and set a
11 standard. And we think until the state finishes its
12 analysis, that it should adopt the World Health
13 Organization standard until, you know, further science is
14 done. And I think it's the only thing appropriate to do.

15 We've known this probably -- we've measured --
16 the Karuk Tribe has measured this plume two years in a
17 row. And we didn't know until we went out there and
18 started doing an analysis that the blooms were this toxic
19 form of blue-green algae microcystis aeruginosa. And so
20 far all we've gotten in response are postings around the
21 reservoirs.

22 But we need to hold people accountable for
23 treating this problem. And as in the video you're about
24 to see, we cannot measure the toxic algae in the inflow of
25 Copco Reservoir. But in the reservoir some of our sample

1 sites exceeded World Health Organization guidelines by
2 4,000-fold. And we shouldn't have to wait till somebody
3 get sick before we do something to fix this problem.

4 We've got the science now and we know this is
5 pending. And some kid's going to go up there, they're
6 going to fall in one of those eddies, one of these
7 backwater eddies and they're going to get a mouthful of
8 this stuff. And then everybody is going to say, "You know
9 what, we should have done something before this happened."
10 And so that's what we're urging you to do.

11 Thanks.

12 CHAIRPERSON DODUC: Thank you.

13 Mr. Baggett.

14 BOARD MEMBER BAGGETT: Yeah. I think as Craig
15 knows, we have a working group on this. We've dedicated a
16 million dollars, which we're just now getting the
17 contracts to begin the studies. I don't know if Beth
18 wants to -- I know Beth has been coordinating that -- Beth
19 Jines, our Chief Deputy.

20 CHIEF DEPUTY DIRECTOR JINES: Yes, that's
21 correct. We have allocated -- the Board has allocated a
22 half a million dollars to do sampling statewide to
23 determine the extent of the blue-green algae. And it is
24 statewide. We've found it in a number of different
25 locations so far.

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1 And then we also have -- the Board has also
2 allocated funding to the Office of Environmental Health
3 Hazard Assessment to do a human health and ecological
4 health risk assessment of what we find in the sampling.
5 We did some samplings this year. We will do more
6 through -- within the next year. And as the data is
7 gathered, we will supply that to them and they will do the
8 risk assessment.

9 BOARD MEMBER BAGGETT: You know, I think as Craig
10 stated, you know, you need the empirical basis. You
11 need -- you don't just set water quality standards in a
12 vacuum. And that's -- but we're moving as quickly as we
13 can get this done.

14 So I appreciate the concern.

15 CHIEF DEPUTY DIRECTOR JINES: We've also -- I
16 just bring it to your attention. We have also added
17 funding this year to complete the Klamath blue-green algae
18 group's sampling that they were doing, because they ran
19 short of funding because the blooms were quite extensive
20 this year. We were able to supply an additional funding
21 so that could be completed.

22 And then also we have put together a work group
23 made up of representatives from a number of different
24 health organizations. It started out the Office of
25 Drinking Water of Health Services and ourselves. And as

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1 people became aware of the work group, it grew enormously,
2 and eventually we've had representatives from Centers for
3 Disease Control in the State of Oregon and all over
4 California. And that group has put together postings,
5 notices that can be used by county health officers
6 throughout the state.

7 And we also have on our website -- on the Water
8 Board's main page there's a link there for blue-green
9 algae. And it will take you to both our website and the
10 Department of Health Services website. And there's a
11 whole wealth of information. And we keep people posted on
12 where we are in the process of studying and analyzing the
13 risk that's posed by the blue-green algae.

14 MR. TUCKER: I would just offer that. I don't
15 want people to misinterpret what we're saying. We are
16 very appreciative of what the Water Board's done and the
17 State of California's done. I don't mean to stand up here
18 and say, "Hey, you're not doing anything about this
19 problem," because you guys are, and I do acknowledge that.
20 And I think what we're saying is we want to go one step
21 further. And until we -- I know the state's putting the
22 pieces together for itself. But there is a good
23 scientific foundation behind the standards set by World
24 Health Organization. And it seems to me that in the
25 interim until you're finished let's be careful and take

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1 good precaution and go ahead and adopt a standard that
2 exists. And that's really the bottom line for why we came
3 here today.

4 BOARD MEMBER BAGGETT: Thank you. Thanks for
5 your help.

6 CHAIRPERSON DODUC: Thank you very much.

7 Ms. Jenny Staats, followed by Mr. Zeke Grader.

8 MS. STAATS: Hi. I'm Jenny Staats and I work
9 with the Klamath Salmon Media Collaborative. We do
10 independent local media out of the mid-Klamath river.

11 And what I'd like to present today is -- my
12 comment is part of a longer film giving some information
13 about the toxic algae in the Klamath River.

14 So thanks.

15 Oh, and just also about the media -- we
16 disseminated the voices from local media in trying to get
17 it into the, you know, more major media, because our local
18 stories are not getting through.

19 So thank you for watching this.

20 (Thereupon a video was played.)

21 CHAIRPERSON DODUC: Thank you very much.

22 Is there anything else?

23 MS. STAATS: No, thank you.

24 CHAIRPERSON DODUC: Thank you.

25 Mr. Grader, and then Mr. David Arwood.

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1 MR. GRADER: Thank you, Madam Chairman, members
2 of the Board. My name is Zeke Grader. I'm the Executive
3 Director for the Pacific Coast Federation of Fishermen's
4 Associations.

5 Our concern here today with this issue is that
6 our members fish along the Pacific Coast for Pacific
7 Salmon, and the fact is is that we're managed on the basis
8 of the health of the Klamath River fish. And we certainly
9 know that this toxic algae is not only a concern for human
10 health, as you just saw on the end of this video, but we
11 also have a very specific concern about how it's affecting
12 fish life as well, certainly as far as everything from
13 dissolved oxygen.

14 But probably more important is that this algae is
15 also helping to create a host for the -- or, excuse me --
16 habitat for the host worm that -- and the worm that hosts
17 the parasite in the river that of course is largely
18 responsible particularly for the juvenile salmon die-offs
19 that we've seen, particularly since 2002.

20 So we think it's extremely important that this
21 board establish now, as has been requested by the speakers
22 before me, to establish numeric standards and get on top
23 of this issue as quickly as possible. I think it's
24 absolutely imperative that we deal with this algal
25 problem, this microcystin as quickly as possible, not

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1 simply for the human health, which is very important, but
2 also for the sake of the economies up and down the
3 California and Oregon coast that depend on this salmon
4 resource.

5 Thank you.

6 CHAIRPERSON DODUC: Thank you.

7 Question from Hoppin.

8 Mr. Grader, please don't go away.

9 BOARD MEMBER HOPPIN: Mr. Grader, is your biggest
10 concern with the blue-green algae and the resultant
11 microcystin or is with the temperatures that allow this
12 algae to bloom?

13 MR. GRADER: I think it's a combination of both.
14 We have got to be concerned with the high water
15 temperatures. But then also the concern is is that -- for
16 example, we're finding the worms that act as the host to
17 the parasite, see Shasta, we're finding is those worms
18 can -- could to be found more where there's really fine
19 sediments. This would reflect from where you get this
20 algae, just breaking down the algae as it comes out of
21 Iron Gate Dam, we're finding it in the lower river.

22 So it's a combination of factors. I don't think
23 there's any one thing. It seems to be mostly two things
24 are converging together to create both the water
25 temperature problem and the problem with algal blooms.

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1 You have nutrient rich water coming out of Klamath Lake
2 coming down the river, hits these reservoirs. They're
3 shallow. In the summer time it warms up. You'll get the
4 algal blooms and that begins creating new problems,
5 everything from warm water discharges to the microcystin,
6 that is, the toxic itself, as well as the fine sediments
7 that are created, that then create the habitat in the
8 river downstream of Iron Gate then for this worm that is
9 part of the lifecycle then of the parasite that's been
10 just so devastating to these juvenile salmon.

11 BOARD MEMBER HOPPIN: Thank you.

12 CHAIRPERSON DODUC: Thank you, Mr. Grader.

13 Mr. Arwood, followed by Regine Chichizole.

14 I will apologize now for mangling everyone's
15 name.

16 Mr. Arwood, welcome.

17 MR. ARWOOD: Thank you.

18 Hello. My name is David Arwood. I was born in
19 Happy Camp. I'm Karuk.

20 I didn't plan on talking when I came down here.
21 Excuse me. Actually I came down here to drum. But they
22 wanted me to talk. So I thought, what could I say that
23 could possibly make a difference this decision-making
24 process that you folks have got to go through concerning
25 the water quality on the Klamath River?

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1 The Klamath Tribe, the Shasta Tribe, Karuk Tribe
2 Yurok Tribe, we're all river people. Everything that we
3 do revolves around that river. We count on that river for
4 our subsistence.

5 Our stories tell us that the creator gave us
6 these rivers and the resources so we could live here, and
7 that we'd always be able to do so. And as our blood
8 continues to proliferate into mainstream society, I wonder
9 if we're going to be able to live here. Maybe we should
10 just wait till someone dies from this algae bloom before
11 we stop and do something about it. I know you all think
12 you're doing something about it now. But you have to
13 really ask yourself, "Am I doing the right thing?" That's
14 what I ask myself all the time -- all the time.

15 I'm from a medicine family, and I have
16 obligations.

17 (Thereupon he spoke in an indian dialect.)

18 MR. ARWOOD: And I'll say it in English.

19 My name is Treewich. I come from T-bar. I'm a
20 medicine person. What's the world coming to? What is the
21 world coming to? Some people aren't real people. We are
22 real people. I know medicine. I carry medicine. I make
23 medicine for the real people in the world.

24 Thank you. God bless us all.

25 CHAIRPERSON DODUC: Thank you, sir.

13

1 I don't want to mangle your name a second time.

2 MS. CHICHIZOLE: Hello. My name is Regine
3 Chichizole and I'm the Klamath River Keeper. I brought a
4 picture today of what it looks like in the Iron Gate
5 Reservoir. It looked like this as of three weeks ago.
6 This is from last year, but I've confirmed with many
7 people this is currently what it was looking like.

8 As you can see, the reservoir --

9 CHAIRPERSON DODUC: Can we see?

10 BOARD MEMBER WOLFF: I cannot see.

11 MS. CHICHIZOLE: I'm sorry. Hard to hold it up.
12 I'm kind of short.

13 CHAIRPERSON DODUC: Thank you.

14 MS. CHICHIZOLE: I also brought a letter here
15 today from over 35 different organizations on the Klamath
16 River and throughout the country asking for microcystin to
17 be treated as a pollutant on the Klamath river and for
18 microcystin to be listed as a pollutant on the Klamath
19 River. On this letter Senator Chesbro and Assemblywoman
20 Patty Berg have also asked for this toxic algae issue to
21 be dealt with by this Board.

22 I believe that PacifiCorps should be listed as a
23 polluter. Their dams are creating this algae. And while
24 the nutrients and the temperatures are adding to it, it is
25 actually the impoundment at the reservoir that is creating

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1 the algae, and it is being released from the reservoir.
2 In my knowledge, they should have to have a permit to
3 release this algae down river. People are afraid to use
4 the river. I get calls all the time from people that are
5 saying, "Hey, I can't go and I don't feel safe going in
6 the river." "I own a fishing industry. I don't know what
7 to do." "I own a boating industry. I don't know what to
8 do." Should I tell people that they shouldn't go in the
9 Klamath River?

10 This is a very serious situation. People on the
11 Yurok Reservation are afraid to go fishing. This is
12 something that needs to be dealt with, it needs to be
13 dealt with some time soon. And so I really encourage you
14 to do it in whichever way you have to, whether it's
15 getting a waste discharge permit, listing it as a
16 pollutant, setting numerical standards. Something does
17 have to be done about this.

18 That being said, I would like to thank the Board
19 for supporting the sediment listing. I heard there's a
20 very good chance that might happen. I would like to
21 encourage the Board also by their looking at that listing
22 to think about what it means to the Klamath dams. I
23 support the sediment listing myself, but I also support
24 the Klamath dams coming out. So if it comes time for the
25 permit to go through on the sediment in the Klamath dams,

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1 please do do that.

2 Other than that, I would just like to say that we
3 really need to do something in the Klamath River right
4 now. It's not like exaggerating that people are afraid to
5 use the river at all. People are driving very, very far
6 to use tributaries at this point. Fish kills are a very
7 regular thing. People don't know whether or not the toxic
8 algae is present in fish. There's a lot of fear right now
9 going on. And I know there has to be more studies to
10 figure out whether or not -- what this means, what the
11 microcystin problem means. But in the short term we
12 should adhere to the WHO standards and we should do
13 something about that.

14 That being said, I of course want to thank you
15 for all your support throughout the time and thank the
16 State of California for their help right now in trying to
17 get the Klamath dams out, and we really need to do it.
18 It's the only way I can see that the microcystin is not
19 going to become a problem any more.

20 Thank you.

21 CHAIRPERSON DODUC: Thank you.

22 MS. CHICHIZOLE: Any time.

23 CHAIRPERSON DODUC: Chicizole.

24 MS. CHICHIZOLE: I'm going to come here a lot
25 too.

16

1 CHAIRPERSON DODUC: Please.

2 Welcome, Karuk Tribal Member Hillman, followed by
3 Yurok Tribal Member Colegrove.

4 MR. HILLMAN: Chook Chook Hillman from Orleans,
5 California.

6 I come here today as a medicine person also. And
7 all I can really say is that, you know, this is scary. I
8 don't know if you guys although understand what the river
9 means to us. I mean we go to our river to get our
10 groceries, you know. And our groceries are contaminated.
11 I don't know if you are familiar with that -- the spinach
12 the other day, it was a big deal. You know, I mean we go
13 to the store, groceries are contaminated. We go to our
14 church and you can get deathly ill. It's just ludicrous
15 to me that something like this could even happen.

16 I don't have much to say. Because I get pretty
17 upset when I talk about it. But this definitely has to be
18 dealt with. You know, it's hard to send our priest to go
19 down to the river to pray, you know what I mean, because
20 he's going to get sick. And, you know, this is our way of
21 life and we just keep going. And this is a big part of it
22 right here.

23 So I'd appreciate, you know, whatever has to
24 happen, it will happen. It will be well appreciated.

25 CHAIRPERSON DODUC: Thank you, sir.

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1 MS. COLEGROVE: I'm Dana Colegrove, and I'm
2 pretty much going to say the same thing he says.

3 We're river people. We have real concerns of
4 what's going on in our river. It's like he said, it is
5 the grocery store for us. You guys had the whole United
6 States freaking out over spinach a couple months ago.
7 Whole California was freaking out over spinach. I don't
8 see nobody freaking out over the river.

9 What's going on? We're not people? We come from
10 a -- there's a lot of us, just like you guys. We need all
11 the help we can get to clean up our rivers. That's our
12 way of life.

13 Sorry. I'm choked up. It makes me upset too to
14 think about all the bad stuff that's going on.

15 We couldn't fish. We couldn't gut our fish in
16 the river. The kids couldn't swim in the river. You
17 couldn't let your animals out to even drink the water
18 because it made them sick, made kids have rashes,
19 everything. It's way out of control.

20 I came a long ways today, and I appreciate you
21 guys listening to me. I'm sorry for checking up.

22 Thank you. Appreciate all your help you can give
23 us.

24 CHAIRPERSON DODUC: Thank you, Ms. Colgrove, and
25 thank you for spending time with us today.

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1 Mr. Richard Watson, followed by Mr. Mati Waiya.

2 MR. WATSON: Thank you, Chair Doduc and members
3 of the Board.

4 Earlier today we were talking a little bit
5 about --

6 CHAIRPERSON DODUC: Actually, Mr. Watson, my
7 apologies. I just looked at your note, and you're not
8 speaking on the Klamath.

9 MR. WATSON: That is correct.

10 CHAIRPERSON DODUC: So if I could please ask for
11 you to step back, and we'll invite you back after the
12 Klamath speakers.

13 MR. WAIYA: I want to thank you for this
14 opportunity. My name is Mati Waiya. I'm working with the
15 National Water Keeper Alliance. And we were really
16 influential in creating the Klamath River Keeper. And we
17 do enjoy suing the state and bringing in the federal
18 government to make sure they do their job. And we look
19 forward to doing that here with the Klamath.

20 Please take into consideration the issues at
21 hand. Go to the river, look at the purity in some areas
22 and the destruction in others. Look at the children
23 playing, just like you would yours, and see the pains that
24 they have to suffer because of memories of a ancestral
25 place is being depleted, destroyed and threatened.

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1 You look at these dams, they're like arteries in
2 your heart. They're clogging up a system of life. You
3 look at the health of the people and a history of a
4 traditional way, a life way. Take for a moment and let
5 yourself into the sacredness of the relationship between
6 you and an environment.

7 I came here about three years ago when Mr.
8 Tamminen was appointed. I did a blessing on this
9 building. I got so many e-mails, hundreds, of people that
10 forgot why they were here; that it wasn't just a job
11 anymore, it was a responsibility. You're here to protect
12 the environment.

13 I want to give you, just for the record, an
14 ancestral song about the water, one verse.

15 "Please, listen to, like a mother giving their
16 child nourishment through their breasts, what the waters
17 do to the land."

18 (Thereupon a song was played.)

19 MR. WAIYA: As you look at the way we treat
20 regulations and process, as we think of our commitment and
21 our responsibility and respect to one another, let's don't
22 take lightly this issue. Let's enforce the Clean Water
23 Act law to the fullest. Let's do our job. The budgets
24 are low, manpower is low. Pay attention to those that are
25 working with you, and that's the citizens. Not special

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1 interests, not necessarily recreation, but the health of
2 an ecosystem.

3 Thank you.

4 CHAIRPERSON DODUC: Thank you, sir.

5 Mr. Mark Miller, followed by Starla Goff.

6 MR. MILLER: Hello. I'm studying ecology at
7 Humboldt and I visited the Klamath frequently. I'm very
8 concerned about the health of the riparian ecosystem
9 because of the toxic algae. And I feel that a very simple
10 and effective way of removing this problem is to
11 decommission and remove the lower four dams on the Klamath
12 river, currently owned by PacifiCorps. For a number of
13 reasons this is very, very important for the Yurok, Hupa,
14 Karuk nations that live along the Klamath River and depend
15 upon the healthy returning migratory salmon populations,
16 and the risks of the Salmon becoming threatened,
17 endangered or extinct because of the continual year after
18 year obstruction of the Klamath River from these four
19 lower dams, that are very outdated and don't even supply a
20 great deal of energy to the power grid.

21 The salmon are affected directly by these toxic
22 algae and all the other microbes, like the C-Shasta that
23 caused the fish kill in 2002 where over 50,000 fish died
24 from the water quality being affected. The dams are
25 directly responsible for several factors. It's the algae

1 blooms because of the higher temperature, the lower water
2 velocity and the trapping of nitrates from the runoff that
3 are coming from the Klamath Basin, the fertilizers and
4 whatnot that enter. So you have these factors.

5 And by removing these dams, this would not be a
6 problem anymore. The water would flow through, the
7 temperature would go to its normal cooler temperature,
8 which the salmon are able to tolerate, which gets them to
9 be able to swim out to the ocean when they're juveniles so
10 they don't get trapped there and they end up having these
11 fish kills.

12 And it's very important for the three nations
13 that I mentioned to have these salmon populations
14 returning and to actually have an increase. And I think
15 what we could see for the benefit of removing these dams
16 is that everyone along the coast who depends upon fishing,
17 whether they be professional fishermen or whether it's for
18 the tribal nations that live there, there would be an
19 increase in salmon populations because the salmon could
20 then have better restored habitat, there'd be less
21 putrification, less toxic algae, or none at all if even --
22 because they would not be trapped behind these
23 impoundments. These dams are basically obstructions.
24 They're obstructing the water flow, and that's why this
25 toxic algae is magnified to the point where it's becoming

1 a crisis. And I believe that it is a crisis.

2 In order to save the salmon and to prevent the
3 salmon from becoming endangered, threatened and extinct,
4 we need to really focus on decommissioning these dams and
5 recommending that the Federal Energy Regulatory Commission
6 decommission the PacificCorps' lower four Klamath dams in
7 this year of 2006 and that they be removed and the river
8 be restored. And then we will see in 5, 10, 15 years an
9 increase in salmon population, which will be good for the
10 economy of the coastal region and for the spiritual and
11 cultural health of the Yurok, Hupa, and Karuk peoples who
12 depend upon this.

13 Anything else to me, in my opinion, and other
14 people's too, is a form of cultural genocide that by
15 keeping these obstruction dams -- the dams obstructing the
16 Klamath River, this is contributing to a genocide because
17 it is not allowing the spiritual activities and the
18 cultural activities that revolve around the salmon and the
19 returning of the salmon, the world renewal ceremony to
20 continue because of the threat of the toxic algae to the
21 fish, number one, that is a food source, a nutrition
22 source and a spiritual source, and also just being there
23 and being in the physical presence of that river is
24 important. And you cannot get that close to the water
25 without having some kind of a contact with either the

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1 aerosol particulates from the algae or just the
2 unpleasant -- the general unpleasantness of it. And it is
3 dangerous and it is toxic.

4 So these dams really need to be removed, and we
5 need to recognize -- I really hope that you could
6 recommend to FERC that the Klamath dams are decommissioned
7 and removed.

8 Thank you very much.

9 CHAIRPERSON DODUC: Thank you. Thank you, Mr.
10 Miller.

11 Please.

12 MS. GOFF: Yes. My name is Starla Goff. I am an
13 attorney for the New Algae Company in Klamath Falls,
14 Oregon. We're your neighbor to the north.

15 Klamath Falls, as you know, sits right next to
16 Klamath Lake, which is full of blue-green algae. The New
17 Algae Company has been involved in actually the
18 nutritional supplements of blue-green algae for decades.

19 Klamath, lake as you know, even though it is
20 replete with blue-green algae, it is a naturally forming
21 occurrence. It is an occurrence that occurred, you know,
22 thousands of years ago due to the nature of the ancient
23 seabed, and is actually one of the sources for your
24 Klamath River.

25 It is something that we've been dealing with in

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1 Just a point of order. I wanted to comment on
2 the algae issue in support of Dr. Gold's comments. But
3 also whatever you decide on this directly impacts
4 obviously the Klamath algae issue, on which I definitely
5 wanted to speak. So perhaps I could kill two birds with
6 one stone.

7 CHAIRPERSON DODUC: Please go ahead.

8 MS. SHEEHAN: Okay, great. Thank you.

9 My understanding is that staff didn't list them
10 early because of this issue about toxic algae as a
11 condition, not a pollutant. And Dr. Gold spoke at length
12 with regard to some of the impairment issues. But I
13 wanted to reiterate some of the legal issues, that it's
14 not clear to me, you know, where the legal basis is, for
15 the Section 303(d) says if it's a pollutant, then you need
16 to list the water body that is impaired by the pollutant
17 for that pollutant.

18 Forty CFR 122.2 defines pollutants to include
19 biologic materials. And I know this particularly well
20 because this was something that I have debated back and
21 forth with with State Water staff for a number of years
22 with respect to invasive species. And that was part of
23 the TMDL litigation that was brought. And one last year
24 where the Court definitively said that invasive species
25 are biological materials and therefore need to be listed,

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1 just like bacteria and viruses. And whether or not there
2 are other pollutants in the water body that may exacerbate
3 or enable the biological material to be there or not be
4 there has never been an issue with invasive species and
5 with bacteria and viruses.

6 Even though that is sort of the case, high
7 nitrogen content can create regrowth conditions for
8 bacteria that otherwise might die, certainly some
9 pollution issues are things that invasive species
10 particularly like, for example. But that doesn't come up
11 because it shouldn't come up. And so it shouldn't be an
12 issue here as to whether nitrogen or phosphorus or other
13 issues that, you know, sort of address the toxic algae --
14 that should not be a legal basis and is not a legal basis
15 for not listing it. It's a biological material, it's
16 impairing the waters. It could also be viewed as a
17 toxicant in this case, you know, just like a chemical
18 toxicant impairs beneficial uses. So in that case could
19 be listed in that regard as well.

20 So I would ask you to support -- I support Dr.
21 Gold's comments. I think that toxic algae listings for
22 Calleguas Creek, et cetera, should be included in Region 4
23 and for the same reasons as I'll more briefly state later.

24 The Klamath River should be listed for toxic
25 algae as well. It does not seem to be clear that there's

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FINAL

TABLE 7: ADDITIONS TO THE SECTION 303(D) LIST.

Region	Water Segment	Pollutant
1	Bodega HU, Bodega Harbor HA	Exotic Species
	Clair Engle Lake	Mercury
	Eureka Plain HU, Humboldt Bay	Dioxin Compounds
	Klamath River HU, Lower HA, Klamath Glen HSA	Sedimentation/Siltation
	Mendocino Coast HU, Albion River HA, Albion River	Temperature, water
	Mendocino Coast HU, Noyo River HA, Noyo River	Temperature, water
	Mendocino Coast HU, Noyo River HA, Pudding Creek	Temperature, water
	Russian River HU, Lower Russian River HA, Guerneville HSA	pH
	Russian River HU, Middle Russian River HA, Big Sulphur Creek HSA	Specific Conductance
	Russian River HU, Middle Russian River HA, Laguna de Santa Rosa	Mercury
	Trinity River HU, Upper HA, Trinity River, East Fork	Mercury
2	Anderson Reservoir	Mercury Polychlorinated biphenyls
	Bon Tempe Reservoir	Mercury
	Del Valle Reservoir	Mercury Polychlorinated biphenyls
	Islais Creek	Sediment Toxicity
	Lafayette Reservoir	Mercury Polychlorinated biphenyls
	Lake Chabot (Alameda Co)	Chlordane DDT Dieldrin Mercury Polychlorinated biphenyls
	Nicasio Reservoir	

“Channels of most Lower Klamath tributaries have continued to fill in as sediment yield in the watersheds remains high. Timber harvest in all Lower Klamath watersheds exceeds cumulative effect thresholds and all streams (except upper Blue Creek) have been severely damaged during the evaluation period. Clear-cut timber harvest in riparian zones on the mainstem of lower Blue Creek and the mainstem Klamath River occurred since 1988 in inner gorge locations. Aggradation in salmon spawning reaches can be expected to persist for decades.”

Kier Associates (1999) noted that “major influxes of sediment continue to pulse through the mainstem, restricting pool depths and temperature stratification.” The California Department of Fish and Game (2003) noted that shallow riffle crests in the Lower Klamath River, which are caused by sediment build up as well as low flow releases from dams, impeded fish passage of adult salmon and contributed to the fish kill of over 33,000 adult salmon and steelhead in September 2002.

An investigation should occur on whether the Salmon River should be listed for sediment

While the Klamath Riverkeeper supports the de-listing of nutrients in the Salmon River, we believe that sediment is a major issue in the watershed and needs to be explored. All supporting data validates this claim.

The Mid-Klamath Should be listed for toxic algae

The clear purpose of the Clean Water Act and the Basin Plan is to regulate water quality to support waterways’ beneficial uses and to make the waterways of the United States swimmable and fishable. The beneficial uses of the Klamath River include recreational use and fishing, along with tribal subsistence and ceremonial uses. All of these are threatened by the current levels of toxic algae in the Klamath River.

For the past two years, water samples taken from Klamath reservoirs exhibited some of the highest levels of the toxic blue green algae *Microcystis aeruginosa* in the world. In some samples, the level of toxins exceeded the World Health Organization (WHO) moderate health risk guideline by 4000 times. However, no action beyond occasional posting of signs has been taken to protect the public or to regulate this toxin. The WHO does not publish a numerical standard for what constitutes a ‘high health risk’ instead stating that a high risk is when algal scums are visible on the water’s surface. Scums were clearly visible when samples were taken and where photo documented occurred. Blooms have been so bad in the last two years, that they have turned the color of the reservoirs to anti-freeze green. The toxin created by *M. aeruginosa* is microcystin. Microcystin is a known liver and kidney toxin, and has been shown to be a tumor promoter in laboratory tests.

In addition, a separate toxic algae, *Anabaena flos-aquae* with neurotoxin effects and may be affecting drinking water supplies in Lake Shastina, was not regulated as part of the Shasta River TMDL. Regulatory action on toxic algae in the Klamath River is needed

immediately so that toxin levels in the Klamath River can be addressed in full by the time blooms begin next summer.

Currently, there is no greater issue threatening safety of recreational users of the Klamath River more than toxic algae. Under the Clean Water Act, waterways need to remain swimmable and fishable. It is the job of the North Coast Regional water board to regulate pollutants within the Klamath River. Although the Klamath TMDL process does attempt to address the issues that lead to algal blooms, establishing TMDLs is a lengthy process, which will not put toxic algae standards in place in a timely manner. Meanwhile the public remains in danger of toxic exposure. As stated earlier, the beneficial uses of the Klamath include recreation and fishing. These beneficial uses are obviously jeopardized by inaction on this important health issue, as are the many people and industries in the Klamath that are economically affected by poor water quality.

We recommend that the state board listed the section of the River below Iron Gate for toxic algae.

Recommendation to de-list the Upper Lost River/ Clear Lake Area

We do not support the recommendation to de-list the Upper Lost River and Clear Lake. First beneficial uses, such as the cold water habitat can not be changed with a TMDL, even though documentation suggests otherwise. Second the Upper Lost TMDL actually shows that the Clear Lake reservoir is releasing temperature-impaired water into the Lost River. Most of the comments below are quotes that come directly from the Upper Lost TMDL.

The recommendation to de-list should be couple with the recommendation to list for turbidity/ and or sediment.

The supporting document for the recommendation to de-list continually shows that he segment is impaired for turbidity.

“The Upper Lost River and Clear Lake Reservoir area is not listed as impaired for turbidity on the California CWA §303(d) list. Turbidity impairments are not the subject of this TMDL investigation, so the high turbidity levels were not explored. However, given the high levels of turbidity found in the Upper Lost River below Clear Lake Reservoir some discussion about turbidity is offered. “

“In June 2003, several months after dam construction was completed, samples showed even higher levels of turbidity in the Upper Lost River. The high turbidity in the Upper Lost River seems to be originating in Clear Lake Reservoir. The picture below shows releases from the reservoir on June 11, 2003.”

“The Upper Lost River and Clear Lake Reservoir area is not listed as impaired for turbidity on the California CWA §303(d) list. Turbidity impairments are not the subject of this TMDL investigation, so the high turbidity levels were not explored. However,



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Arnold Schwarzenegger
Governor

March 23, 2007

Ms. Amy Vanderwarker
Outreach Coordinator
Environmental Justice Coalition for Water
654 13th Street
Preservation Park
Oakland, California 94612

Dear Ms. Vanderwarker:

Thank you for meeting with me and Vice-Chair Gary Wolff on February 27, 2007, regarding Blue-Green Algae (BGA). This letter is in response to our discussion at that meeting and to your written correspondence to the State Water Resources Control Board (State Water Board) regarding the public health threat associated with BGA in the Klamath River.

We recognize that the Klamath River has experienced impairments in various beneficial uses due to recurring blue-green algal blooms. Actions that the State and Regional Water Boards are taking to address BGA concerns are outlined below, with additional details in the attached document:

1. Post warnings for affected water bodies if conditions warrant.
2. Work with the Statewide BGA Work Group (the next meeting will be on April 3, 2007, in Sacramento), the Klamath BGA Work Group, and the Drinking Water Program of the Department of Health Services (DHS) to finalize by June 1, 2007, the BGA guidance as a suggested voluntary response to BGA blooms.
3. Post the guidance on websites and distribute to County Health Officers.
4. Finalize contracts with laboratories capable of performing BGA and toxin identification analysis. Perform Statewide BGA sampling during the upcoming bloom season.

California Environmental Protection Agency

